Pb-Free Electronics Risk Management (PERM)

What PERM is:

- A Consortium sponsored by the Aerospace Industries Association (AIA)
  - Includes industry and government organizations with a common interest in managing the risks of Pb-free electronics in Aerospace, Defense, and other High Performance (ADHP) industries
  - Evolved from merger of GEIA's Lead-free Electronics in Aerospace Project (LEAP) WG and the DoD Executive Lead-free Integrated Process Team (ELF IPT)

- Purpose
  - Provide a long-term overall ADHP strategy to deal effectively with Pb-free electronics issues
    - Resulting in a coordinated approach to manage the evolving risks from the global electronics industry transition to Pb-free electronics

- Strategy
  - *Technical knowledge:* Identify sources of information, including research projects, to understand the issues and risks associated with

Deliverables:

- GEIA-HB-0005-1: Program Management/Systems Engineering Guidelines For Managing The Transition To Lead-Free Electronics
- GEIA-HB-0005-2: Technical Guidelines for Aerospace and High Performance Electronic Systems Containing Lead-free Solder and Finishes
- GEIA-HB-0005-3: Rework/Repair Handbook to Address the Implications of Lead-Free Electronics and Mixed Assemblies in Aerospace and High Performance Electronic Systems
- GEIA-STD-0005-1: Performance Standard for Aerospace and High Performance Electronic Systems Containing Lead-free Solder
- GEIA-STD-0005-2: Standard for Mitigating the Effects of Tin Whiskers in Aerospace and High Performance Electronic Systems
- GEIA-STD-0005-3: Performance Testing for Aerospace and High Performance

Current Efforts:

- Performing maintenance of previously released GEIA HBs & STDs
- GEIA-HB-0005-4: Guidelines for Performing Reliability Assessment for Pb Free Assemblies used in Aerospace and High-Performance Electronic Applications (Currently in DRAFT)
- Pb-free Electronics Risk Reduction Project
  - Follow-on effort to “Manhattan Project”
  - Working with OSD to identify / prioritize projects for funding
- Coordination efforts:
  - OSD Technology Focus Team
    - Identify/prioritize projects
    - Encourage release of policy
  - DSPO LSA For Soldering Technologies
    - DoD Soldering Technologies WG
  - AIA Supplier Management Council (SMC)
    - Engaging piece/part manufacturers to address platform integration and system development concerns
  - Beneficiaries Advisory Council
    - Represent the US Departments of Defense, Energy, and Transportation,